ABSTRACT

Propylene homopolymers useful in the manufacture of biaxially oriented films are provided. More particularly, the propylene homopolymers of the present invention are useful as core material for a multilayer biaxially oriented film. The propylene homopolymers of the present invention attain these properties by control of the average meso sequence length, N_m, in the xylene insoluble phase of the polymer concurrently with control of the quantity of xylene solubles in the polymer as a whole. The propylene homopolymers according to the current invention comprise from about 97 to about 91 percent by weight of a xylene insoluble fraction, and from about 9 to about 3 percent by weight of a xylene soluble fraction. The xylene insoluble fraction has a meso run length of less than or equal to 130. Further, the ratio, *r*, of the meso run length of the xylene insoluble fraction to the percent content of the xylene soluble fraction in the propylene homopolymers is 22 or less, as determined by the equation:

$$Nm/\ \%XS = r$$

where: Nm = average meso sequence length of the xylene insoluble fraction; and

%XS = the percent content of xylene solubles in the propylene homopolymer.